

CLAIMS

1. A timepiece module comprising:
 - (a) a timer having (i) a driver; (ii) a controller; and (iii) an output; and
 - (b) a bi-stable display coupled to the timer output; wherein the controller switches
- 5 power to the display less than 60 times a minute.
2. The timepiece module of Claim 1 wherein said display is powered no more than once per minute.
- 10 3. The timepiece module of Claim 1 wherein said display is powered no more than twice a minute.
4. The timepiece module of Claim 1 wherein said display is powered no more than three times a minute.
- 15 5. The timepiece module of Claim 1 wherein said display is powered no more than ten times a minute.
6. The timepiece module of Claim 1 wherein said bi-stable display is an
- 20 electrophoretic display.
7. The timepiece module of Claim 1 wherein said bi-stable display is a gyricon display.
- 25 8. The timepiece module of Claim 1 wherein said bi-stable display is flexible.
9. The timepiece module of Claim 1 wherein said bi-stable display is invertable.
10. The timepiece module of Claim 1 wherein said display comprises a plurality of
- 30 addressable segments.

11. The timepiece module of Claim 9 wherein said invertable display can display a dark segment on a light background.

12. The timepiece module of Claim 9 comprises a driver that can invert the display to display a light segment on a dark background.

13. The timepiece module of Claim 9 wherein the controller inverts the display at a predetermined rate.

14. The timepiece module of Claim 9 wherein a user can selectively invert the display.

15. The timepiece module of Claim 1 further comprises a voltage source coupled to the timer.

16. The timepiece module of Claim 15 wherein said voltage source comprises a battery.

17. The timepiece module of Claim 15 wherein said voltage source comprises a solar cell.

18. The timepiece module of Claim 15 wherein said voltage source comprises a mechanical source.

19. The timepiece module of Claim 15 wherein said voltage source is a thermal source.

20. The timepiece module of Claim 1 further comprises a light source adjacent to the bi-stable display, wherein said display is reflective and wherein said light source illuminates the display.

21. The timepiece module of Claim 20 wherein said light source is an LED.

22. The timepiece module of claim 20 wherein said light source is an EL.

5 23. The timepiece module of Claim 1 wherein said bi-stable display is bi-chromatic.

24. The timepiece module of Claim 1 wherein said bi-stable display is poly-chromatic.

10 25. The timepiece module of Claim 1 wherein said time further comprises a voltage step-up circuit.

26. A timepiece module comprising:
(a) a timer having (i) a driver; (ii) a controller; and (iii) an output; and
(b) a bi-stable display coupled to the timer output; wherein the controller switches power to the display less than 60 times a minute.

5 (c) light source adjacent to the bi-stable display, wherein said display is reflective and wherein said light source illuminates the display.

27. The timepiece module of Claim 26 wherein said light source is an LED.

10 28. The timepiece module of claim 26 wherein said light source is an EL.

29. The timepiece module of Claim 26 wherein said display is an electrophoretic display.

15 30. The timepiece module of Claim 26 wherein said display is a gyricon display.

31. The timepiece module of Claim 26 wherein said b-stable display is optimized to maintain a state for no less than one minute.

20 32. The timepiece module of Claim 26 wherein said timer includes a voltage step-up circuit comprising a series of cascading diodes.

33. A timepiece module comprising:
(a) a timer having (i) a driver; (ii) a controller; and (iii) an output; and
(b) a bi-stable display having an invertable display, and coupled to the timer
output; wherein the controller switches power to the display less than 60 times a minute,
5 and wherein said timer can have an alarm that triggers the inversion of the display.

34. The timepiece module of Claim 33 wherein said display is invertable between a
first state and a second state.

10 35. The timepiece module of Claim 33 wherein said invertable display can display a
dark segment on a light background.

36. The watch of Claim 33 wherein the driver inverts the display at a predetermined
rate.